

Appl. No. 09/203,894
Amendment dated April 14, 2003
Reply to Office Action of January 13, 2003

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

Claims 1-5, 7, 8, 13-19, 21, 22, and 26-28 are pending in the application with claims 10-12, 24, and 25 having been canceled and claims 1, 13-15, 27, and 28 having been amended.

The disclosure has been objected to because according to the Examiner: "On page 7, line 8, 'VI improvers' are mentioned. The meaning of the abbreviation 'VI' (viscosity index?) is not known. Neither is the meaning of 'API Group I or II or III or IV base oil' in the Tables. Appropriate correction is required."

Further, claims 3-5, 13, 14, 17-19, 27 and 28 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as their invention.

Specifically, according to the Examiner: "Claims 3-5 and 17-19 contain the unknown compounds named 'API Group I or II or III or IV'. Claims 13, 14, 27 and 28 contain the unknown abbreviation 'VI' and improper Markush language. There can be no abbreviations in the claims, there can be no unexplained abbreviations in the specification and proper Markush language is always 'selected from the group consisting of', never --selected from the group comprising--. The meaning of 'API Group I or II or II /sic/ or IV base oil' is not known either."

The improper Markush language in claims 13, 14, 27, and 28 has been corrected by the above amendments to those claims.

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The Examiner's objections and rejections relating to use of the terminology API groups and VI improvers is respectfully traversed.

Initially, it is requested that if the Examiner should persist in his position that "[t]here can be no abbreviations in the claims", he provide authoritative support for his position, since this would preclude the use of chemical formulae, e.g., NaCl, CH₃OH, and the like, which are, of course, abbreviations.

35 U.S.C. 112 only requires that "[t]he specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same," It is the Applicants' position that the terminology "API groups" and "VI" or "V.I." are very well known by those skilled in the lubricant art and that such persons would have no trouble whatsoever in making or using the present invention in the light of the disclosure in the specification containing these terms.

In support of this, the undersigned searched the USPTO Patent Full-Text and Image Database for SPEC/"API Group". The database listed 17 issued U.S. Patents in which this language was used, i.e., U.S. Patent Nos. 5,935,416; 5,935,417; 6,096,189; 6,099,719; 6,136,181; 6,180,575; 6,322,692; 6,323,164; 6,325,918; 6,339,051; 6,362,286; 6,436,882; 6,451,745; 6,458,749; 6,528,458; 6,528,461, and 6,534,452. Assignees of these patents include some of the leading companies in the industry, including, Exxon, Mobil, Chevron, and Lubrizol. They teach that API stands for American Petroleum Institute and that API groups

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are a means of classifying lubricating oil basestocks according to certain criteria. These criteria are set forth in the present application in the table on page 10 at lines 3-10. Clearly, persons of skill in the lubricant art, having the benefit and knowledge of the teachings of the above listed patents in addition to the disclosure of the present specification, would be able to make and use the present invention.

Similarly, with regard to "VI", the undersigned again searched the USPTO Patent Full-Text and Image Database for SPEC/"VI improver" or SPEC/"V.I. improver" and this time received 487 hits. Unquestionably, this is a term that those skilled in the lubricant art are fully familiar with and who, again, would fully understand its use in connection with the present invention. Notwithstanding this, the specification has been amended on page 7 as shown above to point out that "VI" means "viscosity index".

Accordingly, it is submitted that the Examiner's objections and 112 rejections have been overcome or appropriately traversed and their withdrawal is respectfully requested.

Claims 1-8, 13 and 14 have been rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tsutsui et al. U.S. Patent No. 5,744,566.

According to the Examiner: "Tsutsui */sic*/et al. disclose lubricating oils in column 44, line 2 and antioxidants in column 46, lines 5-25. Applicants' claims are not novel. In the alternative, it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to select applicants' claimed antioxidants and lubricating oil, from a list of equivalents."

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It is noted that this rejection has not been applied to claim 12. The feature of claim 12 has now been incorporated into claim 1 and claim 12 has been cancelled. Claims 2-8 and 13 are all dependent upon claim 1. Independent claim 14 already includes the feature of claim 12. Accordingly, it is submitted that the rejection of claims 1-8, 13 and 14 under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tsutsui et al. has been rendered moot and its withdrawal is respectfully requested.

Claims 1-5, 7, 8, 10-19, 21, 22, and 22-28 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii JP-57-115,493, in view of Tomizawa et al. 5,880,073, Ichihashi et al. 5,972,854, Watts et al. 6,121,209, Nadasdi 6,143,702 or Shaub 6,306,802.

Ishii discloses an antioxidant for a lubricant composed of a 2,2,4-trimethyl-1,2-dihydroquinoline polymer containing 5 wt% or more dimer component and less than 10 wt% monomer component. The amount of the antioxidant is generally in the range of 0.1 - 10 wt% based on the lubricant. It is also disclosed that the antioxidant can be used in combination with conventional well-known antioxidants, such as other amine group antioxidants. There is no disclosure or suggestion of the amount of amine group antioxidant that could be used with the dihydroquinoline.

It is understood that the secondary references have been cited to show listings of known amine group antioxidants. None of the secondary references disclose or suggest that such amine group antioxidants could be beneficially employed with a dihydroquinoline. Except for Nadasdi, none of these references make any mention of any kind of hydroquinolines at all, and Nadasdi only notes in column 1 that in U.S. Patent No. 3,346,496 it

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is stated that carbodiimides can be added to lubricants in combination with diphenyl amine antioxidants or hydroquinolines. Nadasdi then goes on to say that this statement is not correct.

All of the claims in the application now require the composition to comprise from about 0.01 to about 10 weight percent of a first antioxidant and from about 0.01 to about 10 weight percent of a second antioxidant. None of the cited art, either alone or in combination, discloses or suggests such a combination.

Accordingly, it is requested that the rejection of claims 1-5, 7, 8, 10-19, 21, 22, and 22-28 under 35 U.S.C. 103(a) as being unpatentable over Ishii JP-57-115,493, in view of Tomizawa et al. 5,880,073, Ichihashi et al. 5,972,854, Watts et al. 6,121,209, Nadasdi 6,143,702 or Shaub 6,306,802 be withdrawn.

In view of the foregoing, it is submitted that this application is now in condition for allowance and an early Office Action to that end is earnestly solicited.

Respectfully submitted,

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